

CLAIMS

1. An optical disk drive, comprising:
  - a spindle motor to turn an optical disk;
  - an OPU to apply an image to a coating within a label region of the optical disk; and
  - an encoder, configured to track disk speed features on the optical disk in a region distinct from the label region and to thereby obtain disk speed data.
- 10 2. The optical disk drive of claim 1, wherein the encoder is additionally configured to track disk angular orientation features molded within the region distinct from the label region.
- 15 3. The optical disk drive of claim 1, wherein the OPU is additionally configured to track disk angular orientation features defined within the label region.
- 20 4. The optical disk drive of claim 1, additionally comprising a control procedure to coordinate disk speed data from the encoder with the OPU during application of the image.
- 25 5. A processor-readable medium comprising processor-executable instructions for labeling an optical disk, the processor-executable instructions comprising instructions for:
  - controlling a spindle motor within an optical disk drive to regulate angular speed of the optical disk;
  - interpreting output signals of an encoder resulting from sensation of disk speed features defined on the optical disk as the optical disk is spun by the spindle motor to produce disk speed data;
  - and
  - marking a coating on the optical disk with an OPU, wherein the OPU is operated according to the disk speed data.

6. A processor-readable medium as recited in claim 5, comprising further instructions for:  
tracking disk angular orientation features with the OPU to produce disk angular orientation data; and  
5 marking the coating using the disk angular orientation data.
7. A processor-readable medium as recited in claim 5, comprising further instructions for:  
tracking disk angular orientation features with the encoder to produce  
10 disk angular orientation data; and  
marking the coating using the disk angular orientation data.
8. A processor-readable medium as recited in claim 5, wherein the controlling comprises instructions for:  
15 processing the disk speed data to determine times when speed of the spindle motor should be increased and times when the speed of the spindle motor should be decreased to maintain desired speed.
- 20 9. A processor-readable medium as recited in claim 5, wherein the interpreting comprises instructions for:  
distinguishing between first and second signals received from the encoder, wherein the first and second signals result from differences in light reflection corresponding to presence or  
25 absence of the molded disk speed features.
10. A processor-readable medium as recited in claim 5, wherein the interpreting comprises instructions for:  
distinguishing between first and second signals received from the encoder, wherein the first signal results when light is reflected  
30 off a mirrored surface and the second signal results when light is reflected by a saw tooth feature.

11. A processor-readable medium as recited in claim 5, wherein the interpreting comprises instructions for:  
distinguishing between first and second signals received from the encoder, wherein the first signal results when light is reflected off a mirrored surface and wherein the second signal results when light is reflected by a molded pit.  
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12. A processor-readable medium as recited in claim 5, wherein the interpreting comprises instructions for:  
distinguishing between the output signals, wherein the output signals are associated with levels of light reflectivity within a region defined on a mirror surface adjacent to the coating on the label side of the disk.  
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13. An optical disk drive, comprising:  
means for controlling a rate at which a spindle motor spins an optical disk;  
means for gathering disk speed data by tracking disk speed features defined on the optical disk as the optical disk is spun by the spindle motor; and  
20 means for labeling the optical disk according to the disk speed data.
14. The optical disk drive of claim 13, additionally comprising:  
means for tracking, with an OPU, disk angular orientation data defined by disk angular orientation features; and  
25 means for passing the disk angular orientation data to the means for labeling to create an image having a desired angular orientation on a coating on the optical disk.

15. The optical disk drive of claim 13, additionally comprising:  
means for tracking, with an encoder, molded disk angular orientation features located radially inside an area on the optical disk reachable by an OPU, to produce disk angular orientation data;  
5 and  
means for using the disk angular orientation data when marking a coating on the optical disk.
16. The optical disk drive of claim 13, additionally comprising:  
10 means for processing the disk speed data from an encoder to determine times when speed of the spindle motor should be increased and times when the speed of the spindle motor should be decreased.
- 15 17. The optical disk drive of claim 13, wherein the means for gathering disk speed data comprises:  
means for distinguishing between first and second signals received from an encoder, wherein the first and second signals result from differences in light reflection corresponding to presence or  
20 absence of the molded disk speed features.
18. The optical disk drive of claim 13, wherein the means for gathering disk speed data comprises:  
means for distinguishing between first and second signals received from an encoder, wherein the first signal results when light is reflected off a mirrored surface and the second signal results when light is reflected by a saw tooth feature.  
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19. The optical disk drive of claim 13, wherein the means for gathering disk speed data comprises:  
means for distinguishing between first and second signals received from an encoder, wherein the first signal results when light is reflected off a mirrored surface and wherein the second signal results when light is reflected by a molded pit.  
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20. The optical disk drive of claim 13, wherein the means for gathering disk speed data comprises:  
means for distinguishing between encoder sensor outputs associated  
5 with levels of light reflectivity within a region defined on a mirror surface adjacent to a coating on the disk.

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